A few months ago I stood in front of one of the most attentive audiences I have addressed and explain what environmental health and the environmental health professional are. As I looked at the roomful of faces, I knew that it was important to have this audience understand the breadth and depth of our profession. The roomful of middle school students expectantly listened to my presentation and at the end, I asked them what they thought the biggest environmental health problem would be in their future. As several hands shot up, I called upon them to share their opinions. One after another the voices answered: water, bad city water, or drought.

It was after this classroom experience that I decided the overarching theme of my year as NEHA president would be water and the growing problems of unacceptable water quality, shortages, and droughts. This problem not only exists in Third World or developing countries, but also here in our own country. Water conflicts might be in our future. Fresh water scarcity in the U.S. might result in more litigation and legislation dealing with water rights for both groundwater and surface water locally, regionally, and nationally. Globally, we might see instability and disputes resulting from claims and counterclaims over an increasingly valuable and essential resource, fresh potable water.


The water we drink today has been around in one form or another for roughly one billion years. Our planet is covered 70% by water, remaining relatively constant at 344 million cubic miles. Yet, we hear daily of poor quality water sources, water shortages, and agricultural stresses. If you take all the water in the world and put it in a five-gallon bucket, the amount of fresh water would be about two tablespoons. Even then, only about 1% of our fresh water is easily accessible with much of it trapped in glaciers and ice fields.


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Although the amount of fresh water has remained constant, unequaled population growth and increased industrialization, agriculture, waste, and pollution are placing severe stresses and strains on our diminishing fresh water sources. Furthermore, the increased demand for meat protein, which requires greater water usage, exacerbates the situation. That single hamburger you enjoyed for lunch takes an estimated 250 gallons of water to produce from farm to table.

We cannot, as professionals, deal with the myriad factors causing the problem, including political, social, economic, and environmental pressures and influences. We can and must protect our fresh water resources from waste, contamination, and inefficient usage.

Now to the point. All of us, as environmental health professionals, have the knowledge, tools, practical experience, and responsibility to mitigate the effects, educate our citizens, and protect the public’s health. No matter where people live and work, they need fresh, potable water to survive and prosper. Water is essential for producing food, clothing, computers; moving our waste stream; and assuring that we and our environment stay healthy.

Preventing contamination of stressed fresh water sources by inadequate sewage disposal, industrial contaminants, urban stormwater pollution, and agricultural runoff is key to reducing fresh water waste and promoting resource preservation.

Environmental health, through local, state, and federal programs and the work of thousands of environmental health professionals, is at the epicenter of implementing measures to prevent, reduce, or eliminate fresh water contamination, and protect our valuable fresh water resources. Creating a healthy built environment needs to include elements that reduce ground and surface water contamination from sewage and stormwater runoff.

It is also incumbent that our profession and NEHA initiate efforts to educate the general public, elected officials, and allied public health professionals in the importance of judicial use of our water resources. Water scarcity is an abstract concept to many and a stark reality to others. An ample supply of
fresh water is necessary for food production and food security.

Most of the U.S. still seems relatively flush with fresh water due to geography, climate, regulation, and engineering. Some regions, however, such as the southwestern U.S., are already water stressed, facing drought and growing populations.

It is time for environmental health professionals to have a seat at the table when planning new residential development, industrial and agricultural expansion, and source protection. Intensified competition for water among agricultural ecosystems, housing, industry, and energy production requires that protection, allocation, and distribution planning is, in large part, an environmental health function.

The challenge we face now is how to effectively conserve, manage, and distribute the water that we have. It is up to environmental health professionals to consider how adequate fresh water affects the residential and built environment, food production, food safety and security, water and wastewater planning and implementation, and zoonotic risks. Environmental health professionals have the knowledge and ability to identify fresh water resources, catalogue how they are used, and identify how climate, technology, policy, and population affect finding solutions and mitigating adverse practices.

Environmental health is the key to rethinking our use, waste, protection, and preservation of our fresh water. It is up to all of us as environmental health professionals to use our skills to ensure stable, adequate, and potable fresh water sources in order to protect the public’s health.

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